

HILL (L.L.)

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BY

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OF MONTGOMERY, ALA.

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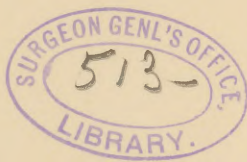
ELEPHANTIASIS.

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IN discussing the geographic distribution of elephantiasis, we find the assertion made by some American writers that it is a disease of great rarity in this country. Such statements are misleading, as it is by no means a surgical curiosity among the negro race in this, the so-called "Black Belt" of Alabama.

Elephantiasis is more common in adult life, though it may be congenital. It occurs three times as often among men as among women. Damp, malarious regions and bad hygienic surroundings, common conditions with the negro race here on cotton plantations, are important predisposing influences.

There are different grades of elephantiasis, "from moderate thickening of the skin and subcutaneous tissue up to enormous enlargement, and similarly great variations in aspect exist, according to the papillary hypertrophy or lymphatic and blood-vessel varicosity and their relative proportions," but every grade is the result of occlusion of the lymphatic channels, and it matters not whether involving the trunk or periphery of circulation. The obstruction may be congenital or due to filaria



sanguinis hominis, cicatricial contractions, tumors or tuberculous or carcinomatous infiltration, or to an acute infective inflammation.

The result of this obstructive lymphangitis is an edema, rich in active leukocytes, which, according to Robinson, not only become connective-tissue corpuscles, but also induce a hyperplasia of the fixed cells already present, producing a hardening and thickening of the skin, with general connective-tissue hypertrophy and increased vascularity, but muscular wasting.

*The symptomatology of elephantiasis in its commencement varies according to whether the disease is endemic or sporadic, though the ultimate termination, pathologically, is the same. According to Mr. Crocker, of London, the beginning of the endemic presents a similarity to the remittent type of malarial fever, differing, however, in that the fever is of greater severity. The affected parts rapidly increase in size and present an erysipelatous blush, with great tenderness. A milky exudation is often present. Such an attack is usually followed by a calm, which may last for months, when there occurs another outburst, always leaving the part larger than before. In elephantiasis scroti the spermatic cord frequently becomes involved to the extent of dilating the abdominal ring, so that upon the subsidence of the swelling a hernia occurs.

In the East, where the disease is endemic, it is almost invariably the result of a parasitic nematode. The worm was first discovered by Bancroft, of Brisbane, in 1876, and is described by Patrick Manson

as "a long, slender, hair-like animal, quite three inches in length, but only $\frac{1}{100}$ inch in breadth, of an opaline appearance, looking as it lies in the tissues like a delicate thread of catgut, animated and wriggling. A narrow alimentary canal runs from the simple club-like head to within a short distance of the tail, the remainder of the body being almost entirely occupied by the reproductive organs. The vagina opens about one twenty-fifth of an inch from the head; it is very short and bifurcates into two uterine horns, which, stuffed with embryos in all stages of development, run backward nearly to the tail." The male worm is smaller and not as frequently found. These entozoa are often conveyed from one person to another by mosquitoes sucking blood containing filaria and afterward contaminating drinking-water. Having once gained access to the human stomach, they bore through into the thoracic duct and pass to the lymphatics, where they locate. How they bring about an obstruction resulting in elephantiasis is not very clear, but the most plausible theory and the one generally accepted is Manson's, who says they give off embryos that, if of natural size, $\frac{1}{90}$ inch long and $\frac{1}{3200}$ inch broad, will circulate readily without disturbing the equilibrium of the host, but if prematurely discharged, they are shorter and thicker, $\frac{1}{750}$ inch in diameter by $\frac{1}{500}$ inch in length, and give rise to obstruction in the lymphatics and lymphatic glands.

In this country, where the disease is rarely of parasitic origin, there are no constitutional symptoms, unless of erysipelatous cause, and the develop-

ment of the disease is always slow. The skin is coarse, darker than natural, and eczematous. Ulceration not infrequently occurs. The decomposition of the elephantoid discharges is very offensive.

In the sporadic cases there is usually loss of sensation, and mendicants with Barbadoes leg take advantage of this fact and stick needles and pins in their limbs to excite sympathy and increase their revenue.

The prognosis, so far as the life of the patient is concerned, is always very favorable, especially in this country, but the patient may be rendered miserable by the immensity of the growth—sometimes weighing more than one hundred pounds.

The treatment of the sporadic cases is very unsatisfactory without surgical interference. During the elephantoid fever of the endemic cases, Sir Joseph Fayrer recommends opium to relieve pain and magnesium sulphate to move the bowels, and a tonic of iron and quinin. Locally, he applies hot fomentations. A change of climate is of paramount importance as soon as the patient's condition will warrant removal.

My clinical experience with this interesting disease is limited to six cases, which I will briefly report:

CASE I.—W. D., a negro laborer, forty years of age, in good health, was sent to me by Dr. C. N. Dorsette, of Montgomery, Ala., in April, 1886, to be operated on for elephantiasis scroti. The enlargement extended a little below the knees, and weighed thirty-one pounds, seriously interfering

with locomotion. The disease was confined to the scrotum ; neither penis nor legs were involved. Unlike the two interesting cases of scrotal elephantiasis reported by Mr. Hutchinson in his *Archives of Surgery*, my patient gave no history of having had syphilis. In 1870, sixteen years before I saw him, he had gonorrhea, which caused a stricture, complicated with a perineal abscess. When I saw him there were two fistulæ, through which the larger portion of the urine was passed. About eighteen months after the formation of the abscess he gave a history of intense inflammation of the scrotum, which I suspect was a scrotal cellulitis the result of irritation from the fistulæ. After the subsidence of the acute attack the patient suffered no more pain, but noticed that the scrotum did not return to its normal size, but steadily increased.

I advised an operation, to which he readily consented. To render the operation as bloodless as possible, I had the tumor elevated for fifty minutes, and then applied a small rubber cord, tightly drawn, around its pedicle. To prevent slipping I had an assistant hold it with retractors. I made a circular incision at the neck of the tumor, and as it deepened and reached the cords and testicles I dissected these out, and afterward partially covered them with skin loosened from the thighs. The numerous bloodvessels were ligated with catgut. Before the patient recovered from the anesthesia I dilated his stricture and tied in his bladder a catheter, which served the treble purpose of relieving the stricture, curing the fistulæ (despite the assertion of Sir Henry Thompson, that "tying in an instrument never insures the transit of all the urine through it ; some will always escape by the side, and defeat its purpose"), and kept the penis from the granulating surface. In six weeks the patient left the city en-

tirely relieved, and there is at this time no evidence of a return.

It occurs to me that Wyeth's method of controlling hemorrhage in hip-joint amputations might be used in these cases, provided an irreducible hernia is not present.

CASE II.—N. T., a negress, forty years old, of Pike Road, Ala., was brought to me by her husband, in June, 1889. She had been married twenty years, but had borne no children. I found elephantiasis of the clitoris, but no other portion of the vulva was involved. The growth measured fourteen inches in circumference at its largest part, and had a pedicle of about half an inch in diameter. The surface was rough, irregular, and ulcerated in several places, but not sensitive to the prick of a needle. The vulva was covered with eczema, which gave rise to intolerable itching. The woman attributed the enlargement to the irritation caused by her scratching, which, she said, had commenced about ten years before I saw her. The patient had tertiary syphilis. I removed the clitoris with an *écraseur*, and at one point, where there was a tendency to bleed, I applied the Paquelin cautery, which completely controlled the hemorrhage. I placed the woman on antisyphilitic treatment, and used an ointment containing salicylic acid for the eczema. When last seen she reported her health as perfect.

CASE III.—W. P., a very muscular negro, twenty-five years old, consulted me on February 5, 1893, concerning an elephantoid prepuce. I found it measuring near the frenum two and one-half inches in diameter, and four-fifths of its circumference involved. On the under surface, about one-quarter of an inch behind the affected foreskin, was a cicatrix one-half inch in diameter, the result of a former

chancroid, which he gave a history of having contracted twelve months previously. The prepuce soon afterward commenced to increase in size. There was no evidence that the patient had ever had syphilis. He suffered no pain, and had had no erection during the last four months previous to consulting me.

I applied a rubber band around the penis and injected thirty drops of a 4 per cent. solution of cocain just posteriorly to the diseased prepuce, where I made my incision, without pain. The vessels were tied with catgut, and the wound left to heal by granulation, which it did in three weeks. The growth was very hard and an unusually small quantity of the yellowish-white lymph exuded on pressure. The skin was smooth, as is generally the case when the under surface of the prepuce is involved, as it comes in contact with the thighs and scrotum.

According to Jacobson, of London, the statistics of the Calcutta Hospital show that only about 3 per cent. of the cases of elephantiasis commence in the prepuce. These cases were found in negroes, who usually have very long foreskins.

CASE IV.—A. R., aged twenty years, white, of Greenville, Ala., was sent to me by the late Dr. Job Thigpen, in March, 1893, to be operated upon for elephantiasis of the penis. The patient stated that he had never been able to draw the prepuce behind the glans, and that the stream of urine had always been very small. About six years before consulting me he had noticed his penis getting larger, and this continued until the organ measured twelve inches in circumference, and was involved for three-fourths of its length. The elephantiasis was evidently due to the congenital stricture of the meatus urinarius and the phimosis.

After placing a rubber band around the root of the penis to control hemorrhage, I made an incision in the whole length of the organ, and extending in depth to the erectile tissue, which was normal, removing all of the diseased tissue. Loosening up the skin freely at the upper end of the wound, I was enabled to get a covering for two-thirds of the organ, and the balance was left to heal by granulation. Fearing an erection, I was careful to have the skin as loose as possible. I directed the man to sleep upon his side, and gave fifteen grains of sodium bromid three times a day for ten days. The patient made a good recovery, and was discharged in about five weeks. He has since married, and says the member gives entire satisfaction. I operated on the stricture by incision while the patient was under the influence of the anesthetic.



Kaufmann states that it is exceedingly rare to see cases in which the penis alone is involved without

the scrotum, this involvement occurring in about 1 per cent. of the cases.

The accompanying photograph gives a good idea of the patient's condition before the operation.

CASES V, VI.—These two cases were under my professional care at the County Almshouse, in 1887. They were both in negro men, and were so similar in their clinical aspect that I report them together.

S. J. was about fifty years old, and in fairly good condition, with the exception of elephantiasis of the whole leg and lower third of the thigh. The former was about double its normal size, and considerably ulcerated. The man stated that the growth had made its appearance about 1865.

F. W. was apparently sixty-five years old, with elephantiasis, involving more particularly the foot, but extending up the leg to within two inches of the knee-joint. Being feeble-minded, he could give no intelligent history of himself.

Neither case showed any evidence of ever having contracted syphilis.

The method of ligating the femoral artery to starve the growth, as was first performed by Dr. Carnochan, of New York, in 1851, has fallen into merited disrepute.

Martin's India-rubber bandage worn constantly renders the patient more comfortable than any other contrivance. In some cases amputation may be justifiable.

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